



ABSTRACTS

SUBSTITUTION OF CORN BY STALE BREAD IN FEED FOR GREY MULLET *Liza ramada*

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This experiment was done in the frame of a project towards the reduction of the food waste. Bakery waste is about 300,000 tons per year in France, i.e. 10% of the national consumption. Stale bread might be recycled through aquaculture feed as source of starch especially for omnivorous species. Among them, grey mullets might be relevant thanks to none bony flesh and high tolerance to water quality (salinity, temperature, oxygen and ammonia). Yet few quantitative data are available hence we performed an experiment to evaluate the interest of replacing corn by stale bread in compounded pellets. The test was done with wild juveniles of thin lip grey mullet *Liza ramada*; this species is the most abundant among the five grey mullet species in the Mediterranean lagoons in France.

Four diets have been prepared with four levels of corn flour substitution by stale bread flour (0, 33, 66 and 100%); both ingredients together made 35% of the total ingredients. The other ingredients were soybean cake and oil, sardine meal and oil, and vitamin and mineral premix. The mixtures were processed into pellets through a small extruder at about 120°C temperature. The mean proteins, lipids and energy contents were 32.9%, 7.3% and 3.8 kcal/g in dry diets. A fifth diet was tested as a kind of control, a commercial tilapia feed (Le Gouessant™) with similar proximate composition.

Each diet was tested in three tanks stocked with 35 fishes per tank (70 L per tank). Tanks were set up in a recycling aquaculture system including the sea lettuce *Ulva rigida* as biofilter. Initial mean body weight and fork length were 42.2 g and 15.5 cm. The experiment lasted for 23 days at 27.2°C.

